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ABSTRACT

This paper uses data from the 1992-93 Vietnam Living Standards Survey (VLSS) to determine the nature of private schooling in Vietnam. With the restructuring of the educational system, some public institutions have been transformed into private ones, some "people's" and community educational institutions have been established, and some rare private institutions have been established. Estimates of the determinants of the choice among public, private, and semi-public schools indicate that better off households are less likely to send their children to semi-public schools but more likely to send them to private schools. Estimates of the determinants of private (household) expenditures on education show that willingness to spend on education increases as the incomes of Vietnamese household rise. No significant effect of religion or ethnicity are found, except that the Chinese have a higher level of schooling attainment and are more likely to attend private schools. Wage regressions indicate that those who attended private school receive higher wages than individuals with the same level of school attainment who attended public schools. The importance of parental education, especially mother's education, as a determinant of children's ultimate attainment is confirmed. One implication of this is that any targeting efforts, such as the provision of scholarships or vouchers, should consider using parental education to determine eligibility. Sections of the report include: (1) "Introduction"; (2) "Overview of the Education System in Vietnam"; (3) "The Current Role of Private Education in Vietnam"; (4) "An Analysis of the Prospects for, and Benefits of, Expansion of the Private Sector"; and (5) "Summary and Conclusion." The appendix offers "Determinants of School Choice, Upper Secondary Level, 1992-93." (EH)

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LSMS
Living Standards
Measurement Study
Working Paper No. 132

The Role of the Private Sector in Education in Vietnam

Evidence from the Vietnam Living Standards Survey

Paul Glewwe
Harry Anthony Patrinos

SO 029 391

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The Role of the Private Sector in Education in Vietnam

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LSMS Working Paper
Number 132

The Role of the Private Sector in Education in Vietnam

Evidence from the Vietnam Living Standards Survey

Paul Glewwe
Harry Anthony Patrinos

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Washington, D.C.

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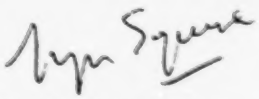
FOREWORD

Education is usually thought of as a publicly provided good, yet in many developing countries households spend substantial amounts of money to send their children to public schools. This is the case in Vietnam, where private schools have only recently appeared. In situations where parents are already making substantial outlays, the question arises whether they may be better served by sending their children to private schools. This paper examines data from the 1992-93 Vietnam Living Standards Survey to investigate who sends their children to private schools, and how much they pay to do so. Although the number of private schools is small, it is growing in both urban and rural areas, and the cost to parents of most private schools is not much higher than the cost of attending public schools. At a more general level, this paper demonstrates how detailed household survey data can be used to understand schooling choices in developing countries.



Lyn Squire, Director
Development Research Group

ABSTRACT

As part of the restructuring of the education system since *doi moi* or Renovation in 1989, the government of Vietnam has implemented several policy changes. These include transforming some public institutions into private ones, promoting the establishment of "people's" and community educational institutions, and permitting the establishment of private institutions. Since the move from a centrally planned economy to a market economy is very recent, it is not surprising that private schools are relatively rare in Vietnam. This paper uses data from the 1992-93 Vietnam Living Standards Survey (VLSS) to examine the nature of private schooling in Vietnam.

Estimates of the determinants of the choice among public, private and semi-public schools indicate that better off households are less likely to send their children to semi-public schools but more likely to send them to private schools. Estimates of the determinants of private (household) expenditures on education show that willingness to spend on education increases as the incomes of Vietnamese households rise. Results also suggest that the marginal cost to households of switching from public to private schools may be small; in particular, there is little additional cost associated with attending semi-public schools, and only very small (and not statistically significant) additional costs to attending a private school. No significant effects of religion or ethnicity are found, except that the Chinese have a higher level of schooling attainment and are more likely to attend private schools. Wage regressions indicate that individuals who attended private school receive higher wages than individuals with the same level of school attainment who attended public schools. The importance of parental education, especially mother's education, as a determinant of children's ultimate attainment is confirmed. One implication of this is that any targeting efforts, such as the provision of scholarships or vouchers, should consider using parental education to determine eligibility.

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I. INTRODUCTION

Most developing countries provide public education without charge or at minimal cost to their citizens. However, fiscal constraints prevent many developing countries from relying solely on government revenues to finance desired educational expansion. To solve this problem, many countries have adopted policies to: (a) charge tuition fees to recoup part of the cost of providing public education services; and/or (b) encourage development of private schools to handle at least part of the expansion.

There are several potential advantages to increased user fees. In principle, charging fees can increase educational spending per student enrolled. It can also improve equity by allowing the public sector to target subsidies more effectively to students from poor families. Moreover, increased cost-recovery can improve school accountability to parents. In many cases increased cost-recovery leads to increased parental involvement in running the school (World Bank 1995a). Finally, selective charges on some learning inputs can increase the effectiveness of service delivery. For example, charging for books improves the on time delivery of materials (World Bank 1988).

Promotion of private schools also has potential advantages. Private funds can increase enrollments, whether they are used at private or at publicly provided institutions. In Asia the more that costs are financed through student fees, the greater is the overall coverage (as measured by the gross enrollment ratio) of the education system (Tan and Mingat 1992). The existence of private schools provides parents with more choices and provides useful competition for public institutions, especially at the higher levels of education. In some countries private provision is publicly financed, either completely (for example, in Canada) or partially. To encourage the development of private schools, the government can relax restrictions, make loans available to schools and provide information to parents

Whether either of these two policies are desirable in practice depends greatly on how they are implemented. This paper examines the role of private education in Vietnam. The next section provides an overall description of education in Vietnam. Section III uses the 1992-93 Vietnam Living Standards Survey (VLSS) to provide further information on schools in Vietnam. Section IV applies regression analysis to the VLSS data to examine several specific issues, and Section V concludes the paper.

II. OVERVIEW OF THE EDUCATION SYSTEM IN VIETNAM

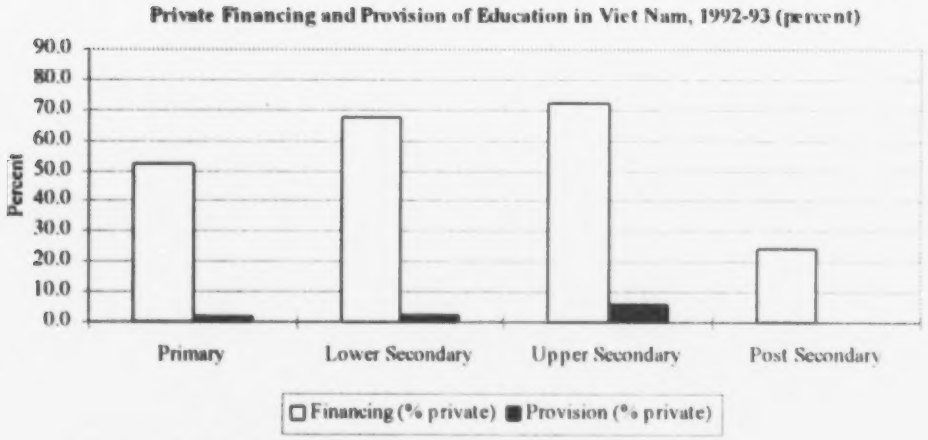
As part of the restructuring of the education system since *doi moi* or Renovation in 1989, the government of Vietnam has implemented several policy changes, including: (a) allowing the transformation of some public pre-school and vocational training institutions into private ones; (b) promoting the establishment of "people's" and community educational institutions; (c) permitting the establishment of private institutions; and (e) encouraging the establishment of nonformal education and self-instruction activities (Sinh and Sloper 1995).

Allowing private and semi-public schools is a fundamental change for the Socialist Republic of Vietnam, but it is not without precedent. In fact, private schools were established by Chinese emperors in Vietnam as far back as 111 BC. After Chinese imperial domination ended in 939 AD, private schools were the dominant form of education during the early Vietnamese dynasties (Pham Minh Hac 1995). Private schools existed in the North until the end of French rule in 1954 (UNICEF 1994), and in the South until 1975.

There are several different kinds of public and private schools in Vietnam. The most common is the ordinary public school, which is intended to be fully funded and operated by the state. In practice, these schools often charge sizable fees to parents, as explained below. Another type is semi-public schools, whose facilities, equipment and curriculum are provided by the state, while teacher salaries, maintenance and other operating expenditures are funded by charging student fees. These may include community schools, which are organized by mass organizations. Finally, fully private schools are run by private groups and individuals and currently receive no funding from the state in Vietnam (UNICEF 1994).

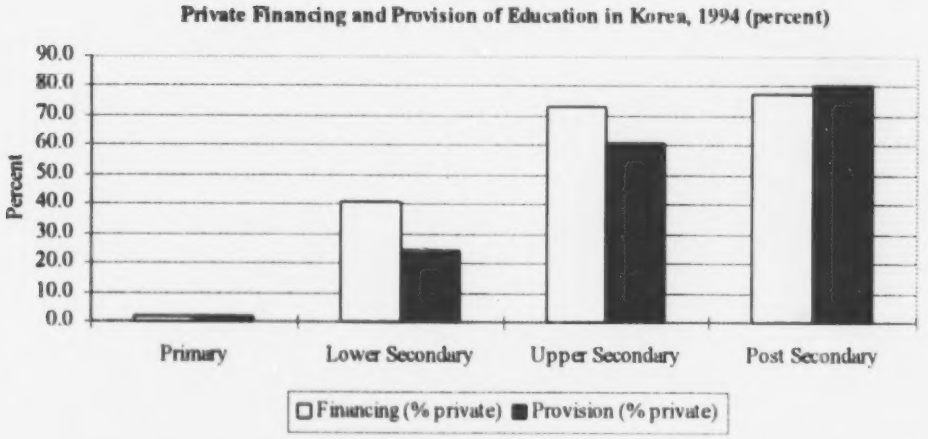
There is currently little private *provision* (in terms of percent of students enrolled) of education in Vietnam (although private provision is growing), but private *finance* is high due to substantial fees charged at public schools. In fact, the situation in Vietnam stands in sharp contrast to that prevailing in South Korea (see Figures 1 and 2). While in South Korea the proportion of private provision is similar to the proportion of private financing, there is very little private provision but considerable private finance in Vietnam. Although primary education in Vietnam is "free," it is clear that parents spend a considerable amount of money to send their children to public schools. The small fraction of the population that gains access to post-secondary education, among whom the better off are heavily over-represented, receives a disproportionate share of the education budget. A recent World Bank report, *Vietnam: Poverty Assessment and Strategy*, summarizes the situation as follows: "Subsidizing one better off student in post-secondary education costs 30 poor students who could be enrolled in primary school" (World Bank 1995b: 88). The pattern of private financing across different levels of education signals an inequitable situation in Vietnam.

Figure 1



Source: VLSS 1992-93; World Bank 1995b.

Figure 2



Source: KEDI 1994; World Bank 1995a.

Primary Education

Most primary education is provided through the public system. But there is an emerging non-public system that includes semi-public, private and community schools. In 1994 there were 181 semi-public primary schools in Vietnam (UNICEF 1994). The facilities, equipment and curriculum for these schools are provided by the state, but the funds for teacher salaries, maintenance and other operating expenses are raised through fees. These schools are subject to the same quality checks as public schools. Fully private schools exist in both rich and poor areas, including remote areas. Very little state assistance is provided to such schools. In rich, urban areas private schools operate for the entire day. Fees are high, at about VND 40,000 per month (UNICEF 1994) (in 1993, one U.S. dollar was worth VND 10,640. A useful approximation is to divide all VND figures by 10,000 to obtain U.S. dollar figures). Finally, community schools are organized by mass organizations such as the Woman's Union, Youth Union and the Peasant's Union. These mass organizations are responsible for all capital and recurrent costs.

Non-public education at the primary level has been growing substantially. The official policy of the Ministry of Education and Training is to increase the number of students in semi-public schools to 15 percent of total primary school enrollments by the year 2000 (UNICEF 1994). Fees charged in semi-public primary schools are approximately VND 30,000 per month, but higher in some areas. Fees cover salaries and maintenance, with approximately 80 percent of the fee going for teacher salaries.

Very little information is available about the quality of both public and non-public education in Vietnam. At the primary level, the quality of semi-public schools is considered higher than that of public schools, especially in Ho Chi Minh City where semi-public schools operate for the entire day (UNICEF 1994).

Secondary Education

Secondary public schools have two types of students: non-repeating students who pay the set maintenance fee and repeating students who pay twice the fee. Each school is only permitted to have 25 percent repeating students. This is a way to increase the teacher's salary. Each teacher can earn another VND300,000 per month on top of their salary. However, this policy is slated to be dropped (Ha 1995). Non-public secondary schools offer an alternative form of education for families who can afford the tuition. The best of such schools boast high acceptance rates for their graduates into tertiary institutions.

Higher Education

In academic year 1994-95 there were 111 public universities in Vietnam. It was not until 1991 that the private sector was formally allowed to be involved in business activities (Thuyet 1995). Since 1993, ten private and semi-public universities have been established, all of which are

Box 1. Binh Minh Primary School

The first semi-public primary school in Hanoi, the Binh Minh School, was established in 1993. There are two types of pupils, private students paying the full cost of their education and learning disabled students financed by the People's Committee. The People's Committee donated the land and buildings in exchange for the school taking in the learning disabled students. The school has 400 pupils, including 40 with learning disabilities, and 30 staff. The school's management board includes parents, teachers and school officials.

In the first year parents paid VND100,000 in "foundation" fees. Tuition fees are VND134,000 per month. These cover salaries and all other expenses. Teacher salaries are about VND400,000 per month. Parents who choose semi-public schools, even though primary education is officially free, do so for the following reasons: better qualified teachers; school runs all day; material beyond the national curriculum is taught; and the cost of semi-public education is not much higher than the cost of public education.

Source: Visit to Binh Minh Primary School, Hanoi, 4 July 1995.

in just three cities: Hanoi, Ho Chi Minh City and Danang. The student population at the schools ranges in size from 550 to 4,700, with one exception: the Open University in Ho Chi Minh City has 21,000 students (Table 1). This is such a recent phenomenon that the 1992-93 Vietnam Living Standards Survey (VLSS) contains little information on private schooling at the tertiary level.

Private and semi-public universities follow the temporary regulations of the Ministry of Education and Training (MOET). There is no system of accreditation in place yet. Those wishing to establish a private institution must apply to MOET, which will then inspect school conditions. If MOET is satisfied, they will then make a recommendation to the Prime Minister's Office. The Prime Minister must give a decree in order to start a private university. Many professors from public institutions work part time in private institutions. Most schools concentrate on foreign languages, computers, economics and management.

Private universities provide annual reports to MOET, but do not yet report on finances. The Prime Minister's Office wishes to further encourage private higher education and is seeking the means by which to transfer resources to private institutions.

Fees at private universities are typically twice as high as fees at public universities. For example, tuition at the Hanoi University, one of the largest public universities, is VND80-100,000 per month, depending on faculty, class size, and cost of course. At Phuong Dong University tuition fees are about VND150,000 per month.

Table 1: Private Higher Education Institutions in Vietnam

Institution	Location	Year Established	Number of Students (1995-96)
Foreign Language and Computer Applications University	Ho Chi Minh City	1994	--
Dong Do University	Hanoi	1994	800
Duy Tan University	Danang	1994	550
Hung Vuong University	Ho Chi Minh City	1995	1,200
Marketing College	Ho Chi Minh City	1993	700
Open University	Ho Chi Minh City	1993	21,260
Phuong Dong University	Hanoi	1994	1,500
Technology University	Ho Chi Minh City	1995	1,200
Thang Long University	Hanoi	1994	600
Van Lang University	Ho Chi Minh City	1995	4,700

Source: Vietnam 1995

-- not available

Box 2. Thang Long University

Thang Long University, Hanoi, is the first private higher education institution in Vietnam. It was established in 1989 by a group of intellectuals as an experiment. It received state authorization in 1994 by MOET as a not-for-profit institution. It began with only one department: Mathematics and Computing Science. In 1993, 204 students were enrolled. The disciplines initially chosen were meant to increase employment opportunities for graduates. Some of the students at Thang Long already have degrees from institutions in the former Soviet Union or from Vietnamese universities, although at first only those students who failed the national examinations enrolled in Thang Long University. Most could not find work, so they hope to improve their chances with degrees in mathematics and computing. In 1992 a management faculty was opened. Thang Long has received assistance from the Institut Superieur de Gestion, Paris, which assists in developing programs and sends books and advisors to Hanoi. Financial resources come from student fees, which in 1993 were VND78,000 per month, and from donations by Vietnamese living abroad, French university professors, NGOs and embassies.

Thang Long is concerned about its financial situation. It is difficult to raise fees in the north for university study. Unlike in southern Vietnam, where people are accustomed to private education and have relatives abroad who can send them money, in northern Vietnam students are accustomed to public education, especially to scholarships that cover tuition and living expenses. Parents in the North are not accustomed to contributing to their children's education, other than paying for private tuition and coaching so that they may pass the national entrance examination. However, parents in the North may pay up to VND200,000 per month for private tuition for their children enrolled in secondary schools and do not want to pay more than 10 percent of the cost of private tuition. Thang Long is attempting to show that they can provide good quality education and that their graduates can obtain good jobs upon graduation. To this end they have hired faculty from the national universities on a part-time basis. Scholarships are given monthly based on assessments. Thang Long teaches in two compulsory languages: English and French.

Source: Sinh and Sloper 1995.

III. THE CURRENT ROLE OF PRIVATE EDUCATION IN VIETNAM

This section uses data from the 1992-93 Vietnam Living Standards Survey (VLSS) to examine the nature of private schooling in Vietnam. According to the 1992-93 VLSS, semi-public and private school enrollments are relatively rare at the primary level. As seen in Table 2, 98.4 percent of children attend public primary schools. The fraction of students that attend semi-public or private schools is slightly higher at the lower secondary level and higher still at the upper secondary level. But even at the upper secondary level 95.5 percent of children are enrolled in public schools. Finally, at the university level the overwhelming majority of students (96 percent) attend public schools. At the university level this is a small proportion of a relatively small number of students. For this reason, university level students are left out of the subsequent analysis.

Table 2: Student Enrollment in Public, Semi-Public and Private Schools in 1992-93
(percent)

	Primary	Lower Secondary	Upper Secondary	University
Public	98.4	98.2	95.5	95.8
Semi-Public	0.4	1.3	2.5	2.1
Private	1.2	0.5	2.1	2.1

Source: VLSS 1992-93

Note: The survey did not have a separate category for community schools

The larger share of private school enrollment at the upper secondary level (relative to the shares at the primary and lower secondary levels) may be due to the fact that an entrance examination must be passed to enter public upper secondary schools. Parents of children who fail the examination may be opting to send them to private schools. This suggests one role for private schools in Vietnam: expanding educational opportunities for children who are excluded from the limited spaces available in public schools.

The proportion of students enrolled in semi-public and private schools by urban and rural areas, by region, by household expenditure class and by sex is shown in Table 3. Students in urban areas are more likely than those in rural areas to attend semi-public schools at the primary and secondary (lower and upper) levels, but there is little difference in the propensity to attend private schools across urban and rural areas. Dividing the population by region does not show any obvious pattern, except perhaps that in the Central Coast region it is somewhat more common to send children to semi-public schools. Differences by income quintile are also not very pronounced; perhaps the only noticeable propensity is a slightly higher probability that wealthier households send their children to private primary schools. One area where a difference emerges is

Table 3: Percentage of Students Enrolled in Semi-Public and Private Schools, 1992-93

	Primary		Lower Secondary		Upper Secondary	
	Semi-Public	Private	Semi-Public	Private	Semi-Public	Private
Urban	2.0%	1.4%	4.5%	*0.6%*	*3.9%*	*0.8%*
Rural	*0.1*	1.2	*0.2*	*0.4*	*1.3*	*3.2*
By Region:						
Northern Uplands	0.0	*0.7*	0.0	*1.3*	*3.1*	*6.3*
Red River Delta	0.0	0.0	0.0	0.0	0.0	0.0
North Central	*0.3*	0.0	*0.7*	*1.3*	0.0	*7.6*
Central Coast	3.4	0.0	5.8	0.0	*5.9*	*2.0*
Central Highlands	0.0	0.0	0.0	0.0	0.0	0.0
Southeast	0.0	2.0	*1.2*	*1.2*	*2.2*	0.0
Mekong Delta	*0.2*	3.5	*0.9*	*4.1*	*4.1*	*2.0*
By Quintile:						
Poorest 20%	*0.7*	*0.2*	*3.0*	0.0	0.0	0.0
Lower Middle 20%	*0.2*	0.9	*0.6*	*0.6*	0.0	*13.3*
Middle 20%	*0.2*	1.3	*0.4*	*0.4*	0.0	*2.6*
Upper Middle 20%	*0.8*	2.1	*1.3*	*0.6*	*1.1*	*2.3*
Wealthiest 20%	0.2	1.7	1.7	*0.6*	4.4	*0.7*
By Sex:						
Boys	0.4	1.7	1.1	*0.2*	3.4	*2.3*
Girls	0.4	0.6	1.6	*0.9*	*0.9*	*1.8*

Source: VLSS 1992-93

Notes:

1. Figures in italics are based on 5 or fewer observations
2. No Information is presented for students of the university level because the number of individuals in the VLSS data who are currently enrolled in a university in quite small (47), of which only one attends a semi-public university and one more attends a private university.

by the sex of the student, boys are more likely to go to private primary schools and to semi-public upper secondary schools; on the other hand, girls are slightly more likely to go to lower secondary semi-public schools.

Although public schools should, in principle, not charge any fees, Table 4 shows that parents pay, on average, VND83,400 for one year of public primary school. The respective figures for higher levels of education in public schools are VND183,300 for lower secondary, VND379,400 for upper secondary and VND934,600 at the university level. These figures include not only tuition and other fees, but also the cost of textbooks, uniforms, parent association fees and any transport and lodging expenses.

Table 4: Mean Household Expenditures on Schooling, Per Pupil in 1992-93
(000's of VND per Year)

Level	Public	Semi-Public	Private
Primary	83.4	89.2	139.7
Lower Secondary	183.3	397.9	350.8
Upper Secondary	379.4	736.8	360.8

Source: VLSS 1992-93

Note : There is not much point in using the VLSS data to compare expenditures at the university level since only one individual in the survey was attending a semi-public university and just one more was attending a private university.

The extent to which these fees are a burden can be seen by comparing them to per capita expenditure levels in Vietnam, which are about VND1.4 million. This implies that a family of five would have a household expenditure level of about VND7 million. Thus, sending one child to public primary school would require about 1.2 percent of an average household's expenditures, and the analogous figures are 2.6 percent for lower secondary, 5.4 percent for upper secondary and 13.4 percent for university. While these percentages may seem low, especially at the primary and lower secondary levels, they quickly escalate if one recalls that many families have more than one child in school. For example, a family with three children in public schools, one in primary, one in lower secondary and one in upper secondary, will devote, on average, almost 10 percent of annual household expenditures towards their children's education. Finally, these percentages are even higher for the poorest families. The per capita expenditures of the poorest 10 percent of the population are VND475,000, roughly one third the national average. This implies that for the poorest 10 percent of the population these percentages will be three times as high, so that sending three children to public schools at the primary, lower secondary and upper secondary levels implies spending about 28 percent of total household expenditures on education. Clearly, sending children to public schools involves sizable expenditures by Vietnamese households, which can be particularly burdensome to households with relatively low incomes.

In general, households spend more if their children attend semi-public or private schools, but the differences with expenditures on public school are not as high as one might expect (Table 4). At the primary level, mean expenditures on semi-public schools are only slightly higher than those on public schools, and expenditures on fully private schools are only about 68 percent higher. At the lower secondary level, mean expenditures on children attending semi-public and private schools are about twice as high as expenditures for children in public schools. Finally, at the upper secondary level expenditures on students in semi-public schools are almost twice as high as those on students in public schools, but there is very little difference between fully private schools and public schools.

Although the VLSS does not contain price data for semi-public and private schools, evidence on household expenditures on schooling (Table 4) suggest that prices may not be much higher than those for public schools, particularly at the primary level. If semi-public and private

schools have significantly higher levels of quality than public schools, one would expect that many Vietnamese households would find it worthwhile to enroll their children in those schools. The fact that they do not implies that either semi-public and private schools are not of higher quality, or they are such a new phenomenon that most households do not have access to such schools. As will be seen below, there is some evidence from the VLSS that semi-public and private schools are of higher quality, which suggests that lack of such schools is a more likely explanation. One implication of this conjecture is that there is a market for such schools and that this market should develop over time.

IV. AN ANALYSIS OF THE PROSPECTS FOR, AND BENEFITS OF, EXPANSION OF THE PRIVATE SECTOR

The preceding section presented simple descriptive statistics concerning the role of private schools in Vietnam. This section will use the 1992-93 VLSS data more systematically to glean further information on how households decide where to send their children to school, and what the costs and benefits are of choosing private schools. The basic statistical tool used in this section is regression analysis.[1]

Perhaps the most basic question regarding education in Vietnam is: Who goes to school at all? In Vietnam, about 90 percent of all children eventually go to school. Table 5 presents probit estimates of the determinants of school enrollment for children aged 8 to 15 years. Children less than eight years of age are excluded because they may simply have delayed school enrollment. In general, if a child has not enrolled in school by age eight, he or she is unlikely ever to enroll; the fraction of eight-year-old children who have never enrolled in school is 8.4 percent, which is similar to the figure of 6.0 percent for all children aged 8-15 years. Parents' education has a strong positive impact on whether children attend school, and the impact of mother's education is particularly strong; an increase in father's education by one standard deviation (about 3 years), raises the probability of attending school by 2.7 percent, but a similar increase in mother's education raises the probability by 8.3 percent. However, caution is in order when interpreting those estimates. In particular, part of the impact of parent's education may reflect unobserved "ability", which is correlated with parental education. This implies that increases in parental schooling, holding a child's ability constant, may have somewhat smaller effects than those shown in Table 5. Table 5 also shows a positive impact of household per capita expenditures. A one standard deviation increase in (the log of) this variable raises the probability of enrollment by 2.7 percent. However, one finding that may not have been foreseen is that girls are much less likely to attend school than boys; other factors held constant, the probability that a girl will attend school is almost 8 percent lower than the probability that a boy will attend.

Once parental education and household income are accounted for, there are no statistically significant differences between urban and rural areas, and the differences across the seven different regions in Vietnam are small and not statistically significant (at the 5 percent level). In addition, most differences across ethnic groups (the omitted ethnic group is Vietnamese) are not

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[1] One technical issue that comes up in the analysis is that in each regression presented in this section there are some students that come from the same family. The appropriate regression technique to account for this "clustering" does not change the point estimates but can increase the standard errors of the estimates (see Deaton 1997). For our purposes, applying these techniques makes little difference because most of the children were from separate households (for example, the 2,655 children in primary school came from 1,876 households). Applying the techniques revealed only a marginal increase in standard errors, so we report results based on more familiar standard techniques, which do not account for clustering.

Table 5: Determinants of School Enrollment (Probit), Vietnam, 1992-93

Variable	Coefficient	t-statistic	Impact on Probability	Mean	Std. Dev.
Constant	-0.6075	-1.51	a	1.000	--
Mother's Schooling	0.0727	7.80	0.083	5.540	3.421
Father's Schooling	0.0330	3.63	0.027	6.958	3.296
Log Per Capita Expenditures	0.2048	3.68	0.027	7.034	0.534
Female	-0.2986	-6.53	-0.075	0.493	--
Urban	-0.0106	-0.15	-0.003	0.175	--
Region:					
North Uplands	-0.1410	-1.65	-0.037	0.160	--
North Central	0.0345	0.39	0.009	0.130	--
Central Coast	0.1771	1.89	0.041	0.119	--
Central Highlands	0.2052	1.29	0.047	0.031	--
Southeast	0.1080	1.12	0.026	0.115	--
Mekong Delta	0.0100	-0.12	0.003	0.234	
Ethnic Group:					
Tay	0.0459	0.26	0.011	0.019	--
Thai	-0.0059	-0.03	-0.001	0.009	--
Chinese	0.1976	1.04	0.045	0.019	--
Khome	0.5400	2.64	0.102	0.014	--
Muong	-0.2347	-1.52	-0.065	0.019	--
Nung	0.1367	0.79	0.032	0.020	--
H'mong	1.1934	2.16	0.152	0.002	--
Other Non-Vietnamese	0.6343	3.00	0.114	0.024	--
Religion:					
Buddhist	-0.0111	-0.19	-0.003	0.260	--
Christian	0.0965	1.04	0.023	0.088	--
Animist	-0.1774	-0.60	-0.048	0.009	--
Other	-0.2154	-1.55	-0.059	0.025	--
Household Size	-0.0160	-1.36	-0.008	6.387	2.07
N	4405				
Log Likelihood	-1959.23				

Source: VLSS 1992-93

Notes: 1. Includes all children age 8 to 15; 2. The excluded dummy variables are Red River Delta (region), Vietnamese (ethnic group) and "None" (religion); 3. "Impact on Probability" is the estimated impact of the variable on the probability of enrolling in school, evaluated at the mean values of other variables. For continuous variables, the estimated impact is for a one standard deviation increase in the value of the variable. For dummy variable, it is the full impact of the variable (changing value from zero to one).

a = No variation in this variable for the regression.

-- No standard deviation is given because the variable is a dummy variable.

statistically significant. The three ethnic groups variables that are statistically significant are the Khome, H'mong and "other non-Vietnamese" variables. The impacts they show are quite large, but since these ethnic groups are concentrated in a small number of communes (as opposed to being dispersed throughout Vietnam), they may reflect local factors instead of ethnic group differences. For example 76 percent of the Khome in the VLSS come from only four communes (out of a total of 150 communes in the sample), *all* of the H'mong come from a single commune, and 89 percent of "other non-Vietnamese" come from five communes. There are no statistically significant differences by religious affiliation (the omitted category is "none"). Finally, even household size has little role to play once one controls for income level and parental education. In summary, having educated parents and coming from a relatively well-off household raises one's chance of attending school, while being female significantly reduces it. In contrast, where one lives (urban versus rural areas, and geographic region), one's ethnic and religious affiliation, and the size of one's family all have little role to play.

One of the explicit objectives of the Vietnamese government is that every child in Vietnam should enroll in school. Although over 90 percent do, it is important to find ways to encourage the remaining 6 to 7 percent to enroll. Table 4 suggests that the costs of schooling could be a major impediment to school enrollment for poorer families, while Table 5 shows that families with relatively uneducated parents and/or low incomes are less likely to enroll their children. This suggests a strategy whereby scholarships or vouchers are established that would allow children from low-income families to enroll at a reduced cost (or no cost at all). A major problem with such a scheme is that income is difficult to observe, so that families with relatively high incomes will try to get the same assistance, and it will be difficult to prevent this. However, given the results in Table 5 it may be more feasible to base scholarships on the level of education of the parents, which is more easily observed and indeed is a matter of public record. Specifically, children whose parents, especially their mothers, have low levels of education should be eligible for a scholarship or voucher scheme.[2] Targeting the children of parents with low education is argued for in a series of papers analyzing the determinants of child labor in a number of countries (Grootaert 1997; Cartwright and Patrinos 1997; Cartwright 1996; Sakellariou and Lall 1997). They argue that subsidies should be provided directly to poor families with low parental education, who are prone to having working children, so that they may afford to send their children to school.

Who Attends Private and Semi-Public Schools?

Section II pointed out that few children attend private schools in Vietnam, and found few trends regarding who attends. Tables 6 and 7 examine who goes to semi-public and private

[2] One specific advantage of such a scheme is that there are no perverse incentive effects. Unlike current income, parental education cannot be lowered to increase a child's eligibility for a voucher or scholarship. It is also unlikely that parents will reduce their children's schooling in order to increase educational opportunities for their future grandchildren.

schools in Vietnam using a discrete choice model, the multinomial logit model.[3] The coefficients given indicate the impact of a particular variable on the probability of going to a semi-public or private school, relative to its impact on the probability of going to a public school. An alternative to the multinomial logit model, which allows for three choices (public, semi-public and private) would be a simple logit or probit model, which would only allow for two choices (public versus other). A simple logit or probit implicitly assumes that the coefficients that determine the choices for semi-public and private (relative to public) are equal to each other (i.e., that the coefficients in Tables 6 and 7 are the same for these two types of schools). This hypothesis is decisively rejected by the standard likelihood ratio test.

Beginning at the primary level, one can see in Table 6 that both mother's and father's schooling reduce a child's (relative) probability of going to a private school, but have no effect on the (relative) probability of going to a semi-public school. Better off households are less likely to send their children to semi-public schools, but more likely to send them to private schools. Ideally, one would like a price variable for each of the three types of schools. Regional mean expenditures on each type of school were used as a price variable, but the estimated coefficient had the wrong sign and was completely insignificant (t-statistic of 0.7). Girls are less likely to go to private schools, but there are no significant differences by sex in attending semi-public schools. Children in urban areas are more likely to send their children to semi-public schools, but there is little difference by urban and rural areas in the probability of going to a private school. Chinese are more likely to attend private schools, and members of other non-Vietnamese ethnic groups are less likely. As explained in Table 6 (note 3), it is not possible to estimate the impact of the ethnic group variables on the probability of going to a semi-public school. Finally, household size has little impact on the probability of attending either semi-public or private schools. Splitting household size into two variables, number of household members of school age (age 0-18) and number of adults (age 19 and older), also produced statistically insignificant results.

The determinants of the type of lower secondary school attended are presented in Table 7. Similar results for upper secondary schools are not shown because the sample consisted of only 272 individuals, and none of the variables was statistically significant (these results are presented in the appendix). Because so few children were attending semi-public and private lower secondary schools, few of the results are significant. Overall, there are only three significant results:

- Higher levels of per capita expenditures make children less likely to attend semi-public schools;
- Children with better educated fathers are less likely to attend private schools; and
- Children in urban areas are more likely to attend semi-public schools.

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[3] One could also use an ordered probit model, but this requires one to impose, *a priori*, an order to the three choices, and to assume that the impact of independent variables does not vary across different types of schools. We prefer a multinomial logit, which is more flexible.

Table 6: Determinants of School Choice, Primary Level (Multinomial Logit), 1992-93

	Parameter Estimates		Impact on Probability			
	Semi-Public	Private	Semi-Public	Private	Mean	Std. Dev
Constant	2.0907 (0.38)	-9.9246 (-3.45)	a	a	1.000	--
Log Mother's Schooling	-0.6019 (-1.10)	-1.0740 (-3.61)	-0.0002	-0.0239	1.527	0.753
Log Father's Schooling	0.7877 (0.90)	-0.8015 (-2.59)	0.0003	-0.0153	1.798	0.627
Log Per Capita Expenditures	-1.6106 (-2.15)	1.3960 (3.54)	-0.0004	0.0193	6.990	0.512
Female	0.0255 (0.04)	-1.1510 (-2.59)	-0.0005	-0.0341	0.472	--
Urban	4.3746 (3.98)	-0.7842 (-1.13)	-0.0002	-0.0185	0.149	--
Chinese	0.0000 a	2.4937 (3.24)	a	0.0366	0.014	--
Other	0.0000 a	-1.9317 (-1.84)	a	0.0041	0.127	--
Household Size	0.0694 (0.46)	-0.0507 (-0.57)	-0.0005	-0.0039	6.290	2.101
Sample Size	2629					
Log Likelihood	-170.66					

Source: VLSS 1992-93

Notes:

1. Asymptotic t-statistics given in parentheses.
   The omitted school category is public school.
2. Only two ethnic group variables are used, Chinese and "Other". This is because: 1. Of the 9 students in the sample that attended semi-public schools, all are Vietnamese; 2. Of the 30 students who attended private schools, 25 were Vietnamese, 4 were Chinese and 1 belonged to another ethnic group (Khome). The coefficients on these two ethnic group dummy variables are constrained to equal zero for semi-public schools because no students in either group attended those schools. Removing the constraints simply yields large, yet statistically insignificant, negative values for those coefficients.
3. Regional dummy variables were dropped due to insufficient observations in most categories

a = no variation in this variable for the regression.

-- No standard deviation is given because the variable is a dummy variable.

Table 7: Determinants of School Choice, Lower Secondary Level (Multinomial Logit), 1992-93

	Parameter Estimates		Impact on Probability			
	Semi-Public	Private	Semi-Public	Private	Mean	Std. Dev
Constant	1.8105 (0.46)	-5.6362 (-0.80)	a	a	1.000	--
Log Mother's Schooling	-0.5385 (-1.18)	0.1882 (0.24)	-0.0013	0.0004	1.688	0.657
Log Father's Schooling	1.0362 (1.30)	-1.1879 (-1.61)	0.0020	-0.0020	1.956	0.521
Log Per Capita Expenditures	-1.3963 (-2.78)	0.2410 (0.26)	-0.0027	0.0004	7.228	0.534
Female	0.1524 (0.29)	a	-0.0033	a	0.459	--
Urban	3.7553 (4.68)	0.7630 (0.69)	0.0014	-0.0028	0.248	--
Household Size	0.0621 (0.53)	-0.0014 (0.01)	0.0033	-0.0000	6.180	1.894
Sample Size	1200					
Log Likelihood	-96.76					

Source: VLSS 1992-93

Notes:

1. Asymptotic t-statistics given in parentheses.
2. The omitted school category is public school.
3. The female dummy variable is constrained to equal zero for private schools because no boys in the sample attended private schools. Removing this constraints would make the sex a variable very large and the constant term a very large negative number.
4. Regional and ethnic dummy variables were dropped due to insufficient observations in most categories.

a = no variation in this variable for the regression.

-- No standard deviation is given because the variable is a dummy variable.

The two results relating to semi-public schools are also found among children attending primary schools, which suggests that those schools are most commonly found in urban areas and cater to relatively poor households.

To summarize the results of Tables 6 and 7, some interesting findings emerge but their interpretation is not always clear. At both the primary and lower secondary levels, semi-public schools are more commonly chosen in urban areas, and are more likely to be chosen by poorer families. The first result may simply mean that semi-public schools are more likely to exist in

urban areas. The second may imply that semi-public schools are located in relatively poor communities within urban areas. Being female has a significant negative effect on the probability of attending a private primary school, which may imply that girls are discriminated against (recall from Table 5 that girls were also less likely to enroll in school than boys). The finding that parental education makes children less likely to attend private primary and lower secondary schools is also puzzling, since one usually expects better educated parents to prefer higher quality schools, and private schools are usually assumed to have higher levels of quality than public schools. Finally, it appears that Chinese households favor private schools. During French rule Chinese primary schools existed in southern Vietnam until 1975. They were private schools until 1956 (ADB 1995). Further interpretation of these results requires more information on the nature of both semi-public and private schools.

Determinants of Private Spending on Education

While Table 4 in the previous section gives a rough idea of the costs of attending public, semi-public and private schools, more can be learned by examining the determinants of total school expenditures using standard regression techniques. Table 8 presents results from regressing (the log of) total school expenditures for each student on a variety of household variables. Separate regressions are presented for each schooling level. Turning to the primary school results, mother's and father's schooling have a small positive impact on school expenditures. A much stronger effect is shown by household per capita expenditures, which are expressed in logarithms so that the coefficient on it is an elasticity. While this coefficient is less than one, indicating that education is not a luxury good, the impact is still quite high, which implies that as the incomes of Vietnamese households continue to increase, their willingness to spend on education will increase. Given Vietnam's recent high rates of economic growth, it appears likely that willingness to pay for education will increase over time in Vietnam, which provides scope for improving school quality, either through cost recovery in public schools or through increased enrollment in high-quality private schools.

The remaining results for the primary school expenditures regression are as follows. The amount spent on girls is about 5 percent less than the amount spent on boys. There is a large tendency to spend more in urban areas; about 79 percent more, *ceteris paribus*, even after controlling for household expenditure levels. The regional variables show a clear tendency for spending to increase as one moves from northern regions to southern ones. It should be kept in mind that the command economy was not introduced in southern Vietnam until after reunification in 1975, and that south Vietnamese residents received large amounts of remittances from family living abroad. Chinese households spend more on education than any other ethnic group, about 35 percent more than the amount spent by Vietnamese. Some ethnic minorities spend significantly less, in particular, the Khome, Muong, H'mong and "other non-Vietnamese"; it is interesting that three of these four groups also had a higher probability of enrolling (see Table 5), and perhaps the best explanation is that these groups are concentrated in areas where tuition fees and other school costs are low, which would raise enrollment and allow families to spend less on

education per child. There is little difference by religious affiliation except that Buddhists appear to spend significantly less, and household size also has little effect.

Table 8: Determinants of Household Expenditures on Schooling, 1992-93

	Primary		Lower Secondary		Upper Secondary	
Variable	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.
Constant	5.923	26.73	7.414	24.70	8.221	11.54
Mother's Schooling	0.012	2.30	0.013	1.85	0.019	1.36
Father's Schooling	0.015	2.89	0.009	1.23	-0.016	-0.92
Per Capita Expenditures	0.630	20.66	0.519	12.86	0.517	5.42
Sex	-0.047	-1.87	-0.079	-2.32	-0.081	-1.01
Urban	0.581	14.53	0.476	10.14	0.310	3.20
Regions:						
North Uplands	-0.129	-2.69	-0.142	-2.24	-0.258	-1.85
North Central	0.164	3.51	0.207	3.44	0.086	0.58
Central Coast	0.482	9.28	0.650	11.01	0.399	3.12
Central Highlands	0.597	7.13	0.839	6.99	0.175	0.28
Southeast	0.873	16.69	0.812	12.09	0.480	3.34
Mekong Delta	0.687	14.77	0.872	14.77	0.542	3.91
Ethnic Group:						
Tay	0.174	1.88	-0.145	-0.96	-1.134	-2.48
Thai	0.124	0.84	-0.183	-0.70	a	--
Chinese	0.300	2.68	0.260	2.51	0.175	0.92
Khome	-0.515	-5.23	-0.424	-1.61	a	--
Muong	-0.323	-3.53	-0.402	-2.94	0.635	1.76
Nung	0.173	1.85	-0.144	-0.64	a	--
H'mong	-0.939	-3.21	0.912	1.57	a	--
Other Non-Vietnamese	-0.459	-4.78	0.423	0.72	0.215	0.34
Religion:						
Buddhist	-0.194	-5.99	-0.165	-3.71	0.066	0.64
Christian	-0.039	-0.81	-0.230	-3.63	-0.098	-0.53
Animist	0.229	0.48	-0.030	-0.09	-0.001	-0.00
Other	0.149	0.73	0.021	0.17	-0.190	-0.52
Household Size	0.013	1.91	0.013	1.36	0.026	1.25
School Type:						
Semi-public	-0.211	-0.91	0.333	2.20	0.423	1.78
Private	0.215	1.69	1.127	3.84	-0.555	-1.27
Sample Size	2610		1196		269	
R^2	0.519		0.589		0.510	

Source: VLSS 1992-93

Note: Each observation is an individual student, not an entire household.

a = No variation in this variable for the regression.

-- No standard deviation given because the variable is a dummy variable.

The last two variables, dummy variables indicating whether the school attended is semi-public or private, are intended to be more accurate indicators of the marginal cost to households of switching from public to private schools. They indicate no additional cost at all associated with attending semi-public primary schools, and only a very small (and statistically significant only at the 10 percent level) additional cost to attending a private primary school. Note that the coefficient on the private school implies that such schools cost about 24 percent more than public schools (i.e., $e^{0.206} = 1.24$).

Regressions of school expenditures on a variety of explanatory variables for lower secondary schools are presented in Table 8. Many of the results are similar to those found for primary schools, except that fewer variables are statistically significant. First, per capita expenditures have a strong impact on spending, even after controlling for region of residence and urban versus rural areas. The income elasticity implied is about 0.53. As with primary schools, girls get slightly less than boys (about 8 percent less), residents of urban areas spend substantially more (about 61 percent more), less is spent in northern regions, Chinese spend more (30 percent more than Vietnamese), Buddhists spend less than other religious groups (and at this schooling level so do Christians), and there is little difference by household size. Unlike semi-public primary schools, semi-public lower secondary schools are significantly more expensive, about 40 percent more expensive than public lower secondary schools. Private lower secondary schools are even more expensive, nearly three times as expensive as public schools, *ceteris paribus*.

Finally, Table 8 presents regression results for upper secondary schools. Though statistical significance is clearly lower, the strongest results from lower levels of schooling still hold: wealthier households spend more, as do households in urban areas, and households in the southern regions of Vietnam. No other results are significant at the 5 percent level, but a significant result at the 10 percent level is that semi-public schools are more expensive, about 150 percent more expensive than public sector schools. A last surprising result is that private upper secondary schools are less expensive than public schools, but this result is not statistically significant.

Parents sending their children to semi-public or private schools often spend considerably more than do parents who send their children to public schools (Table 8). One can use these results to estimate, holding everything else constant, the cost of switching to a semi-public or private school. Table 9 shows such results for different expenditure groups, expressed as a percentage of total household expenditures. Switching from a public to a private primary school would entail only a 0.1 to 0.6 percent increase in spending on schooling, as a percentage of total household expenditure. However, at the lower secondary level the cost can be significant for the poor, especially when one considers that families can have more than one child. Policy makers would need to consider the effects of rapid private sector expansion on equity outcomes. However, this result can be used to tailor policies that expand educational opportunities and promote equity. Such measures may include targeted scholarships for the poor (for example, by targeting scholarships to children whose parents have low levels of education) and increased choice.

Table 9: Estimated Cost of Switching from a Public to a Semi-Public or Private School, 1992-93

	Primary School	Lower Secondary School	
Quintile	Public to Private	Public to Semi-Public	Public to Private
1 (Poorest)	0.6	2.3	11.8
2	0.5	1.8	8.7
3	0.3	1.3	6.6
4	0.3	1.0	5.0
5 (Wealthiest)	0.1	0.5	2.6

Source: VLSS 1992-93

Note: All figures are expressed as percentage of total household expenditures

What Are the Benefits of Private Schooling?

The analysis so far has shown that semi-public and private schools are not necessarily much more expensive than public schools, with the exception of private schools at the lower secondary level. The question remains whether any added costs yield future benefits. Perhaps the most direct way to answer this question is to examine whether individuals who attended semi-public and private schools in the past earn more than otherwise identical workers who attended public schools. Table 10 presents a simple wage regression intended to answer this question. The log of earnings is regressed on years of schooling, years of experience, years of experience squared, regional dummy variables and two dummy variables that indicate that the last school attended was semi-public and private. These regressions include only private sector wage earners, since their wages are more likely to reflect actual productivity, while the wages of public sector workers may simply reflect administrative regulations. One has to bear in mind that most (over 85 percent) of the current wage workers who attended private schools did so before 1975, and almost all of these (over 90 percent) attended such schools in the southern half of the country. Thus the private schools that were attended by today's wage earners were presumably abolished in the late 1970s and may have little direct relationship with the private schools that exist today.

The main result in Table 10 is that there are probably (statistically significance at the 10 percent level) benefits to attending semi-public schools and definite benefits to attending private schools. The regression shows that attending a semi-public school leads to a 33 percent increase ($e^{0.2865} = 1.33$) in wages, while attending a private school leads to a 30 percent increase. Although these estimates rest on several assumptions that are difficult to verify, they do suggest that attending private schools can lead to higher wages, which is consistent with the hypothesis

that private schools have, in general, higher levels of quality than public schools. However, this conclusion must remain tentative because most of the wage earners who attended private schools did so before 1975, as explained above.

Table 10: Determinants of Earnings, 1992-93

Variable	Coefficient	t-statistic
Constant	6.4295	53.70
Years Schooling	0.0164	2.65
Experience	0.0216	3.41
Experience Squared	-0.0005	-3.94
Sex (female)	-0.4232	-10.63
Semi-public	0.2865	1.77
Private School	0.2613	2.55
Region:		
Red River Delta	0.0536	0.64
North Central	0.0136	0.14
Central Coast	0.2363	2.67
Central Highlands	0.4793	3.65
Southeast	0.7259	8.89
Mekong Delta	0.6224	7.60
Sample Size	1113	
R^2	0.251	

Source: VLSS 1992-93

Note: Sample consists of all private sector wage workers.

V. SUMMARY AND CONCLUSION

As part of the restructuring of the education system since *doi moi* or Renovation in 1989, the government of Vietnam has implemented several reform options. These include the transformation of some public institutions into private ones, stimulating the establishment of "people's" and community educational institutions and permitting the establishment of private institutions. Since the move from a centrally planned economy to a market economy is very recent, it is not surprising that private schools are relatively rare in Vietnam.

In general, semi-public and private schools are not much more expensive than public schools. Better off households are less likely to send their children to semi-public schools, but are more likely to send them to private schools. If semi-public and private schools have a significantly higher level of quality than public schools, many Vietnamese households may find it worthwhile to enroll their children in private schools.

The analysis of the determinants of private expenditures on education shows that as the incomes of Vietnamese households continue to increase, their willingness to spend on education will increase. Results also indicate that the marginal cost to households of switching from public to other kinds of schools is small. In particular, they indicate little additional cost associated with attending semi-public schools, and usually only small (and not statistically significant) additional costs to attending a private school (the one exception is that private schools appear to be much more expensive at the lower secondary level). Finally, wage regressions suggest that semi-public and private schools may have higher levels of quality than public schools.

What are the policy implications of these findings? In particular, would the use of vouchers, or other policies to promote school choice, be appropriate for Vietnam? The basic idea of vouchers is that if a child is moved from a public to a private school, part (or even all) of the private school expenses are paid with a voucher and the public school system loses that amount of money. This fosters competition in that public schools have to compete with private schools for the money that they would lose if a child chose a private school. It also assists parents who want to send their child to a private school but cannot afford it by lowering the price of private school attendance. This demand-side financing mechanism may also raise total enrollment because there may be parents who are unwilling to send their child to a public school, even though it may be cheap, but are willing to send their child to a private school if the price were lower.

Assuming our school expenditure data are accurate, in Vietnam parents are *already* bearing a lot of the cost of sending their children to public schools, so the role of vouchers in terms of making the price of private schools not much higher than the price of public schools is already being fulfilled in the current system. That is, it is already the case that private schools, where they exist, do not cost much more than public schools. In addition, the role of vouchers to foster competition is also already being played because public schools will lose a sizable amount

of real money if parents take their children out of a public school and enroll them in a private school.

The question then becomes: If the current system in Vietnam is so favorable to school choice, why do so few children attend private or semi-public schools? Perhaps the main reason is that such schools are quite new in Vietnam. It seems likely that private schooling will continue to increase in the near future. There is already some evidence that this is occurring. But residents in northern Vietnam have not been exposed to private schools for years, if ever, and so it may take time for a market for private schooling to develop. Another possible reason is restrictions on private schools in Vietnam, such as limits on the fees they can charge or the students they can enroll. Reducing these restrictions could greatly increase school choice and lead to improved schooling outcomes.

A final policy question is how to promote schooling in general, given that 6-8% of children still never attend school. One way to promote education among households that are poor and/or have "low tastes for schooling" is to offer vouchers (or scholarships) to children whose parents have low levels of schooling. The probit estimates show that parental education is an important determinant of who goes to school at all, and people with low levels of schooling are quite likely to have low incomes and low tastes for schooling. Targeting by income level is difficult, since income is hard to observe, but schooling levels of parents should be easy to observe. There is little chance of creating perverse incentives (i.e., encouraging parents to have low levels of schooling) because their schooling is already set and cannot be changed. These vouchers could be used at either public or private schools, and therefore might raise demand for the formation of private schools.

Appendix: Determinants of School Choice, Upper Secondary Level, 1992-93

Variable	Semi-Public	Private
Constant	-6.3428	5.2709
	(-0.93)	(0.50)
Log Mother's Schooling	-0.4058	-0.8861
	(-0.59)	(-1.31)
Log Father's Schooling	0.3600	0.6763
	(0.33)	(0.55)
Log Per Capita Expenditures	0.4620	-1.5109
	(0.54)	(-1.05)
Female	-1.4706	0.5094
	(-1.34)	(0.49)
Urban	0.9961	-0.3117
	(1.02)	(-0.23)
Household Size	0.0689	0.1603
	(0.39)	(0.66)
Sample Size	272	
Log Likelihood	-48.38	

Source: VLSS 1992-93

Notes:

1. t-statistics given in parenthesis.
2. The omitted school category is public school.
3. Regional and ethnic dummy variables were dropped due to insufficient observations.

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